

REMARKS

Claim 28 directed to ant-1-4 has been rewritten as new claim 29 using the terminology for the strains set forth in the figures.

The new claims 30-42, as is now cancelled claim 28 and newly added claim 29, are directed to a mutant yeast of the instant invention. Hence, the arguments hereinbelow in rebuttal of now cancelled claim 28 are believed to apply to the newly presented claims and thus are responsive directly to the outstanding Office Action.

In item 18 on page 2 of the Office Action, the specification is objected to and claim 28 is rejected under 35 U.S.C. §112, first paragraph.

First, the Examiner believes that ant-1-4 is not disclosed.

As noted in the Declaration of S. Hiu filed 23 September 1993 in parent case U.S. Ser. No. 07/837120, a copy of which is attached hereto for the convenience of the Examiner, the laboratory designation for ant-1-4 is IGI887J2 as found in Figure 2. Also, the laboratory designation of ant-1 is IGI887J0.

The Examiner believes it is necessary to deposit ant-1-4.

To the contrary, the instant application teaches a reproducible method for obtaining a yeast of the instant invention. Please refer to the specification which teaches a number of strains

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as claimed and the Declaration of Hiu which provides evidence of additional strains which fall within the scope of the instant claims. Clearly the instant application teaches a reproducible and enabled process and product.

In any event, ant-1 (IGI887J0) and ant-1-4 (IGI887J2) have been deposited under the provisions of the Budapest Treaty. Those strains as well as the several wild-type strains deposited at the ATCC are readily available starting materials of the instant invention.

In item 21, claim 28 was rejected under 35 U.S.C. §101 because the Examiner believed the subject matter is a product of nature.

Ant-1-4 is a mutant yeast that produces an elevated level of astaxanthin. That property is noticeable and determinable practicing the methods taught in the instant specification. For example, the elevated levels of astaxanthin which distinguish the instantly claimed yeast from the wild-type yeast of the ATCC catalog are observable when the yeast are cultured for five-six days in YM medium, extracting the pigments and measuring the same using an extinction coefficient of 2100.

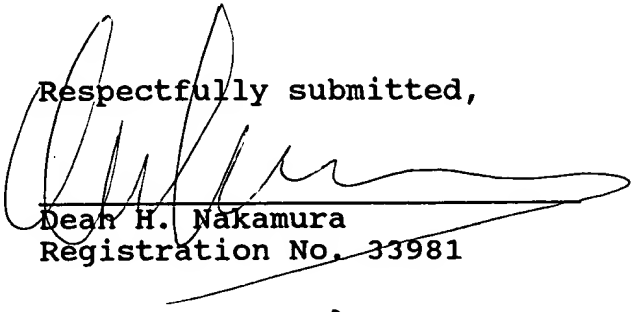
Clearly the instantly claimed pigment mutant Phaffia are patentable and the specification and claims are in compliance with 35 U.S.C. §112. Reconsideration in view of the newly presented claim, withdrawal of the objection and rejections as to now cancelled claims 28 but which were rebutted with reference to the

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newly presented claims to pigment mutant yeast and early  
notification of allowance are requested respectfully.

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Respectfully submitted,



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